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      Set  Items  Description
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Set     Items   Description
S1          4   NORTEL AND (MULTIMEDIA (5N) CLIENT)
S2       2974   MULTIMEDIA AND COLLABORATION
S3       6714   (MULTIMEDIA OR (MULTI-MEDIA OR (MUTI() MEDIA))) AND COLLAB-
            ORA?
S4    7357782   AUTHOR OR MODERATOR OR REVIEW? OR TEAM
S5        511   COMMITEE
S6    1143141   MEETING OR CONFERENCE
S7       3362   INTERCONNECTIVITY
S8    7358175   4 OR 5
S9        188   3 AND (6 OR 7) AND 8
S10       167   S9 NOT PY>2002
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S11	151	RD (unique items)
S12	26	S11 NOT CONFERENCE
S13	322	VIRTUAL (2N) MEETING
S14	215	S13 NOT PY>2001
S15	139	RD (unique items)
S16	57	S15 AND S4
S17	81	S12 OR S16
S18	81	S17 NOT PY>2001
S19	12121	PEER AND REVIEW
S20	2	S18 AND S19
S21	77	S18 NOT PY>2000
S22	4999785	SOFTWARE OR APPLICATION
S23	9756	DATABASE (5N) RECORD?
S24	32	S21 AND (S22 OR S23)
S25	21322	SOFTWARE (5N) SPECIFICATION?
S26	4	23 AND 25
S27	9646	PROGRAMMING (5N)SPECIFICATION?
S28	3	23 AND 27
S29	2	S28 NOT S26
S30	150668	SOFTWARE () ENGINEERING
S31	85	19 AND (25 OR 27 OR 30)
S32	51	S31 NOT PY>2001
S33	42	RD (unique items)
S34	1971250	VIRTUAL OR RECORD?
S35	1	33 AND 34

24/5/1 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

08727211 E.I. No: EIP00125440890
Title: CAIRO: A concurrent engineering **meeting** environment for **virtual** design teams
Author: Pena-Mora, F.; Hussein, K.; Vadhavkar, S.; Benjamin, K.
Corporate Source: Massachusetts Inst of Technology, Cambridge, MA, USA
Source: Artificial Intelligence in Engineering v 14 n 3 Jul 2000. p 203-219
Publication Year: 2000
CODEN: AIENEJ ISSN: 0954-1810
Language: English
Document Type: JA; (Journal Article) Treatment: A; (Applications); T; (Theoretical)
Journal Announcement: 0101W4
Abstract: This paper presents the **software** architecture for a next generation concurrent engineering environment that helps geographically separated designers and engineers to collaborate effectively. The paper highlights research in computer-supported collaboration work (CSCW) based on various models of group interaction, social communication theory, negotiation theory and distributed artificial intelligence concepts. The paper describes CAIRO (Collaborative Agent Interaction and synchROnization)

system, a distributed conferencing architecture for managing designers and engineers in a distributed design meeting. The CAIRO system allows designers and engineers to work together in virtual teams by supporting multi-media interactions over computer networks. CAIRO aids the concurrent engineering effort by relaxing the physical, temporal and organizational constraints experienced in traditional design meeting environments. CAIRO provides both media synchronization, i.e. ensuring that all information exchanged between users is synchronized, and agent synchronization, i.e. ensuring effective structuring and control of a distributed conference. This paper also details the prototype CAIRO system with a detailed example, illustrating its use in concurrent design settings. (**Author** abstract) 29 Refs.

Descriptors: *Artificial intelligence; Concurrent engineering; Computer architecture; Computer **software**; Groupware; Computer supported cooperative work; Multimedia systems; Data structures; Synchronization; Virtual reality

Identifiers: Collaboration model; Conference management

Classification Codes:

723.4 (Artificial Intelligence); 723.5 (Computer Applications); 913.6 (Concurrent Engineering); 723.2 (Data Processing)

723 (Computer Software); 913 (Production Planning & Control); 722 (Computer Hardware)

72 (COMPUTERS & DATA PROCESSING); 91 (ENGINEERING MANAGEMENT)

24/5/7 (Item 7 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

07254907 E.I. No: EIP95092863271

Title: Multi-point virtual space teleconferencing system

Author: Noma, Haruo; Kitamura, Yasuichi; Miyasato, Tsutomu; Kishino, Fumio

Corporate Source: ATR Communication Systems Research Lab, Kyoto-fu, Jpn

Source: IEICE Transactions on Communications v E78-B n 7 Jul 1995. p 970-979

Publication Year: 1995

CODEN: ITRCEC ISSN: 0916-8516

Language: English

Document Type: JA; (Journal Article) Treatment: A; (Applications)

Journal Announcement: 9511W3

Abstract: This paper discussed a distributed processing architecture for a virtual space teleconferencing system. Virtual space teleconferencing is a promising **application** field for networked virtual environments. People in different places will be able to meet each other in a virtual teleconferencing room and proceed with various cooperative tasks. When such a system creates a realistic virtual environment, it can be referred to as a 'Teleconferencing with realistic sensations' system. Further more, as the conference environment can be shared by a number of users, it is possible to perform various kinds of cooperative work using the system. In this paper, the architecture for networked multi-user virtual space systems are

classified, and then a case study is described for building a proposed teleconferencing system. The system reproduces a 3D image of each conference participant in a **virtual meeting** room. Compared with the former system, the new system can deal with more than three participants at the same time and can connect them through commercial telephone lines. Based on the virtual world database management structure, the system was classified as a central server system. However, a central server architecture limits the number of conference sites. We confirmed that the system can serve up to 14 sites using multi-modal interaction without significant latency in operation from summational experiments. Then, introducing some assumptions to the results, we have proposed processing model of the system. The results of model could describe the experimental results and we could indicate roughly estimated system capacity to realize a required system performance. (**Author** abstract) 10 Refs.

Descriptors: *Teleconferencing; Virtual reality; Computer networks; Computer architecture; Distributed computer systems; Three dimensional computer graphics; Telephone lines; Database systems; Data communication systems; Topology

Identifiers: Communication with realistic sensation; Central server system; Virtual space teleconference; Networked virtual reality; Multi-modal interaction

Classification Codes:

718.1 (Telephone Systems & Equipment); 723.5 (Computer Applications); 722.3 (Data Communication, Equipment & Techniques); 722.4 (Digital Computers & Systems); 723.3 (Database Systems)

718 (Telephone & Line Communications); 723 (Computer Software); 722 (Computer Hardware)

71 (ELECTRONICS & COMMUNICATIONS); 72 (COMPUTERS & DATA PROCESSING)

24/5/8 (Item 8 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

06793451 E.I. No: EIP94011193457

Title: Cooperative development of Linux

Author: Wiegand, James

Corporate Source: Temple Univ, Philadelphia, PA, USA

Conference Title: Proceedings of the 1993 IEEE International Professional Communication Conference

Conference Location: Philadelphia, PA, USA Conference Date: 19931005-19931008

E.I. Conference No.: 19646

Source: 1993 IEEE International Professional Communication Conference Proc 1993 IEEE Int Prof Commun Conf 1993. Publ by IEEE, IEEE Service Center, Piscataway, NJ, USA,(IEEE cat n 93CH3367-0). p 386-390

Publication Year: 1993

ISBN: 0-7803-1466-2

Language: English

Document Type: CA; (Conference Article) Treatment: A; (Applications); G

; (General Review)
Journal Announcement: 9403W3
Abstract: Linux is a UNIX clone being developed by a cooperative of **software** authors who communicate mostly by electronic mail and the USENET newsgroup comp.os.linux. This effort was begun by Linus Benedict Torvalds in 1991 as an exercise in 80386 protected mode programming. From its modest beginnings as a task-switcher, Linus and many contributors have built Linux into a modern operating system. Linux will emerge from beta testing sometime this year. The initial release, which was only useful as a demonstration, sparked an interest in tapping the power present in the Intel 80386/80486 microprocessors. The development of Linux is unique in the history of operating systems. The entire source code is freely distributable, protected by the Free **Software** Foundation 'copyleft.' Linus Torvalds, the main **author** and coordinator of Linux development, is available to offer assistance and consider enhancements to the operating system. Until now, operating system development has been the province of proprietary development companies and academia, which seek to protect the intellectual property that they have developed. This paper examines in detail the cooperative development of Linux. The early history of Linux reveals what inspired people to work with Linus Torvalds initially. Emerging group dynamics are surveyed to find how the current Linux 'club' came to assemble itself. The club model shows how the facilities of the Internet and USENET became their **virtual meeting** place. Analysis of current projects shows how the participants divide themselves into groups according to their interest, and work in these interlocked circles to add to the entire effort. Finally, the club model explains not only the popularity of Linux, but also serves as a model for future **software** development using electronic communications. (**Author** abstract) NR.
Descriptors: *Computer operating systems; Models; Computer programming; Codes (symbols); Information dissemination; Electronic mail; UNIX; Telecommunication services
Identifiers: USENET newsgroups; UNIX clone; Linux; Unix Systems Laboratories (USL); **Software** development; Free **Software** Foundation; Operating system development; Cooperative development; Linus Torvalds; Internet
Classification Codes:
723.1.1 (Computer Programming Languages)
903.2 (Information Dissemination); 723.1 (Computer Programming)
723 (Computer Software); 903 (Information Science)
72 (COMPUTERS & DATA PROCESSING); 90 (GENERAL ENGINEERING)

24/5/9 (Item 9 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

06559155 E.I. Monthly No: EIM9302-007584
Title: MIRROR project: a **virtual meeting** place.
Author: Chappell, David A.; Vogel, Douglas R.; Roberts, Edward E.
Corporate Source: Univ of Arizona, Tucson, AZ, USA

Conference Title: Proceedings of the 25th Hawaii International Conference on System Sciences
Conference Location: Kauai, HI, USA Conference Date: 19920107
E.I. Conference No.: 16959
Source: Information Systems Proceedings of the Hawaii International Conference on System Science v 4. Publ by IEEE, Computer Society, Los Alamitos, CA, USA. p 23-33
Publication Year: 1992
CODEN: PHISD7 ISSN: 0073-1129 ISBN: 0-8186-2440-X
Language: English
Document Type: PA; (Conference Paper) Treatment: X; (Experimental)
Journal Announcement: 9302
Abstract: This paper describes a project designed to combine different communication channels in an environment that integrates audio, visual, and textual media to provide synergistic, comprehensive, and robust support for effective and efficient group interaction. This environment, a **virtual meeting** place we call the MIRROR Project, will further the effective **application** of information technology(IT) through electronic meeting systems(EMS). A broad spectrum of technical and behavioral issues are explored in this paper. The key issues presented represent the challenges associated with effective and efficiently integrating the three channels in a fashion supportive of robust group communication. The paper also discusses the need for a **team** oriented multi-disciplinary, multi-methodological stream of research with a longitudinal focus at individual group, project, and organizational levels of analysis to study the potential, capabilities and capacities of the proposed environment. (**Author** abstract) 18 Refs.
Descriptors: *DECISION SUPPORT SYSTEMS; DATA COMMUNICATION SYSTEMS; DATA PROCESSING
Identifiers: MIRROR PROJECT; ELECTRONIC MEETING SYSTEMS; INFORMATION TECHNOLOGY
Classification Codes:
723 (Computer Software)
72 (COMPUTERS & DATA PROCESSING)

24/5/10 (Item 10 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

05553689 E.I. Monthly No: EIM8803-016330
Title: **VIRTUAL** NETWORKING SYSTEMS - **MEETING** TOMORROW'S PC NETWORKING NEEDS WITH EFFICIENT SOLUTIONS FOR TODAY.
Author: Mahoney, David C.
Corporate Source: Banyan Systems Inc, Westboro, MA, USA
Conference Title: Proceedings of the National Communications Forum.
Conference Location: Rosemont, IL, USA Conference Date: 19851007
Sponsor: Natl Engineering Consortium Inc, Chicago, IL, USA; US Telephone Assoc
E.I. Conference No.: 10852
Source: Proceedings of the National Electronics Conference v 39. Publ by

Professional Education Int Inc p 478-483
Publication Year: 1985
CODEN: PNECAC ISSN: 0077-4413
Language: English
Document Type: PA; (Conference Paper)
Journal Announcement: 8803
Abstract: Virtual networking technology can provide solutions to a broad range of short and long-term corporate communications problems. The key to this technology is an understanding of the personal computer workstation as the key building block in a corporate processing environment. Using a combination of existing hardware including a network server, and sophisticated distributed systems **software**, it is possible to construct a corporate communications solution that goes beyond the normal tasks of sharing peripherals like disks and printers. By exploring a new approach to the design of a corporate communications system--virtual network--corporate planners can consider sharing complete information and computing resources beyond the simple networking cluster to include intercluster communications and gateways to remote information and resources. In this way, an efficient long-term solution for the connection of numerous local area networks can be planned while fulfilling immediate needs for responsive local area networks for work groups and departments. (Edited **author** abstract)
Descriptors: *COMPUTER NETWORKS--*Performance; COMPUTERS, PERSONAL
Identifiers: VIRTUAL NETWORKING SYSTEMS; CORPORATE COMMUNICATIONS PROBLEMS; WORKSTATION; NETWORK SERVER; INTERCLUSTER; LOCAL AREA NETWORKS
Classification Codes:
723 (Computer Software); 716 (Radar, Radio & TV Electronic Equipment); 717 (Electro-Optical Communications); 718 (Telephone & Line Communications); 722 (Computer Hardware)
72 (COMPUTERS & DATA PROCESSING); 71 (ELECTRONICS & COMMUNICATIONS)

24/5/12 (Item 1 from file: 94)
DIALOG(R)File 94:JICST-EPlus

04548857 JICST ACCESSION NUMBER: 00A0434798 FILE SEGMENT: JICST-E
Virtual Environment Synthesis for the Multi-Party Teleconferencing System: CyberCircle.
SATODA KOZO (1); HIRAIKE RYUICHI (1)
(1) NEC Corp., Human Media Res. Lab., JPN
Denshi Joho Tsushin Gakkai Gijutsu Kenkyu Hokoku(IEIC Technical Report (Institute of Electronics, Information and Communication Enginners), 2000, VOL.99,NO.647(MVE99 63-75), PAGE.7-12, FIG.7, REF.8
JOURNAL NUMBER: S0532BBG
UNIVERSAL DECIMAL CLASSIFICATION: 681.3:621.397.3 681.51:007.51 681.3.02+
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication
ABSTRACT: This paper describes the multi-parth teleconferencing system, CyberCircle, which provides a virtual conference environment for various meeting types. On this system, remote participants are extracted from remote-sites' images by subject-background separation and synthesized in the **virtual meeting** room as if they were in the same space. A synthesized virtual environment is displayed on the large screen. CyberCircle achieves multiple eye-contacts by transmitting live video images of each participant taken from the three different directions. At each site, the appropriate image is selected according to the sitting position of the participant in the virtual environment and synthesized in the **virtual meeting** room. (**author** abst.)
DESCRIPTORS: teleconference; virtual reality; tele-existence; computer vision; image synthesis; projected image; user interface; metapher; communication; computer supported cooperative work; eye movement; ATM network
IDENTIFIERS: visual axis
BROADER DESCRIPTORS: conference; computer graphics; image technology; technology; computer **application**; utilization; sense; image processing; information processing; treatment; synthesis; image; interface; groupware; **application** program; computer program; **software**; movement physiology; motion; communication network; information network; network
CLASSIFICATION CODE(S): JE04010I; IB03000G; JE15050M

24/5/13 (Item 2 from file: 94)
DIALOG(R)File 94:JICST-EPlus

03653418 JICST ACCESSION NUMBER: 98A0736159 FILE SEGMENT: JICST-E
Meeting-like Information Sharing Environment.
TAKAHASHI TOORU (1); TAKEDA HIDEAKI (1); NISHIDA TOYOAKI (1)
(1) Advanced Inst. Sci. and Technol., Nara
Jinko Chino Gakkai Zenkoku Taikai Ronbunshu(Proceedings of the Annual Conference of JSAI), 1998, VOL.12th, PAGE.439-442, FIG.6, REF.4
JOURNAL NUMBER: X0580AAA
UNIVERSAL DECIMAL CLASSIFICATION: 681.3:007.51 681.3.02+
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Conference Proceeding
ARTICLE TYPE: Original paper
MEDIA TYPE: Printed Publication
ABSTRACT: Progress in the communication network technology makes forming communities of dispersed members easier. But **collaborations** in such a network community are so delicate that it is difficult to communicate to each other because of its asynchronous distributed nature. We propose **Meeting**-like Information Sharing Environment(MISE) in which the process of **collaborating** is interpreted as the process of knowledge making. This Environment creates more knowledge or know-how and makes such knowledge to recycle by supporting **collaboration**. In this paper, we explain MISE, and also about AOCS(Agent Oriented asynchronous distributed Communication

supporting System). AOCS is implemented prototype system of MISE. AOCS supports awareness among dispersed members of network community by making use of interface agent, and records the whole process of the **meeting**. (**author** abst.)
DESCRIPTORS: knowledge acquisition; computer network; communication; **multi-media**; reuse; reading(library); community; agent; cooperative work
BROADER DESCRIPTORS: acquisition; communication network; information network; network; information media; utilization; action and behavior; group; groupware; **application** program; computer program; **software**
CLASSIFICATION CODE(S): JE08000Z; JE15050M

24/5/14 (Item 3 from file: 94)
DIALOG(R)File 94:JICST-EPlus

03653366 JICST ACCESSION NUMBER: 98A0736107 FILE SEGMENT: JICST-E
The Knowledgeable Community Project. (The Fifth Report). Towards Formation of Community Knowledge.
TAKEDA HIDEAKI (1); NISHIDA TOYOAKI (1)
(1) Advanced Inst. Sci. and Technol., Nara
Jinko Chino Gakkai Zenkoku Taikai Ronbunshu(Proceedings of the Annual Conference of JSAI), 1998, VOL.12th, PAGE.276-279, FIG.7, TBL.1, REF.11
JOURNAL NUMBER: X0580AAA
UNIVERSAL DECIMAL CLASSIFICATION: 681.3:007.51 681.51:007.51
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Conference Proceeding
ARTICLE TYPE: Original paper
MEDIA TYPE: Printed Publication
ABSTRACT: In this paper, we show our attempts towards formation of community knowledge in the Knowledgeable Community. The Knowledgeable Community is a community emerging from interaction among knowledgeable agents such as humans and **software** agents in a knowledgeable field. Community knowledge is both a result of interaction among such agents in a community and a source of forming communities. We investigated formation of community knowledge in the following ways. The first approach is knowledge among homogeneous agents. We developed three systems for this approach; (1) CoMeMo-Community: forming community knowledge as a virtual conversation among agents, (2) Designers Amplifier: exchanging knowledge to form personal knowledge, (3) Meeting-like Information Sharing Environment: extracting human knowledge with a **virtual** **meeting** space. The second approach is knowledge among heterogeneous agents. We discussed knowledge sharing with robots and human, concept extraction from WWW information sources, and organizing unstructured large information sources like protocol data. (**author** abst.)
DESCRIPTORS: knowledge acquisition; man-machine system; community; communication; groupware; protocol; robot; agent; multiagent system; cooperative work
BROADER DESCRIPTORS: acquisition; system; group; **application** program;

computer program; **software**; rule; computer **application** system
CLASSIFICATION CODE(S): JE08000Z; IB03000G

24/5/16 (Item 5 from file: 94)

02295421 JICST ACCESSION NUMBER: 95A0259855 FILE SEGMENT: JICST-E
Technical Support of Networked Virtual Reality "The GreenSpace" Project.
FUKUDA SHUICHI (1); MATSUURA YOSHIFUSA (2)
(1) Tokyo Metrop. Inst. of Technology; (2) Tokyotokagidai Daigakuin
Suridi Eizo(Journal of Three Dimensional Images), 1995, VOL.9,NO.1, PAGE.57-61, FIG.2
JOURNAL NUMBER: L0436AAC ISSN NO: 1342-2189
UNIVERSAL DECIMAL CLASSIFICATION: 621.397.004.14 681.3:621.397.3
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Commentary
MEDIA TYPE: Printed Publication
ABSTRACT: This paper describes our experience of technical support in the demo of the "GreenSpace Project" which links the site at NICOGRAPH'94 in Tokyo and University of Washington in Seattle to realize a **virtual meeting**. This project was launched by the HITL lab, UW and Fujitsu Research Institute and aims at developing networked virtual reality system on the international scale. (**author** abst.) DESCRIPTORS: computer graphics; teleconference; integrated communication network; stereoscopic image; project; Japan; USA; digital communication ; human interface; ISDN; virtual reality
BROADER DESCRIPTORS: image technology; technology; computer **application**; utilization; conference; communication network; information network; network; image; East Asia; Asia; North America; Americas; communication system; method; interface
CLASSIFICATION CODE(S): ND12034M; JE04010I

24/5/17 (Item 6 from file: 94)

02097934 JICST ACCESSION NUMBER: 94A0741926 FILE SEGMENT: JICST-E
An Architecture for Equipments Control of Group Tele-Working System: GTWS.
KINOSHITA SHIGEAKI (1); MIYAMOTO TAKANORI (1); ISHIZAKI TAKESHI (2)
(1) Hitachi, Ltd., Cent. Res. Laboratory; (2) Hitachi, Ltd., System Dev. Laboratory
Joho Shori Gakkai Kenkyu Hokoku, 1994, VOL.94,NO.56(DPS-66), PAGE.37-42, FIG.5, TBL.2, REF.10
JOURNAL NUMBER: Z0031BAO ISSN NO: 0919-6072
UNIVERSAL DECIMAL CLASSIFICATION: 681.51:007.51 681.3.002+ 621.394/.395
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal
ARTICLE TYPE: Original paper
MEDIA TYPE: Printed Publication
ABSTRACT: We developed the Group Tele-Working system(GTWS), which enabled distributed participants to collaborate on their work stations using multimedia information. Multiple conference spaces are represented by the **virtual meeting** room windows and the participant can switch from one conference space to another by selecting the meeting room window. The voice and video are controlled with the change of the meeting rooms. This paper describes the system configuration overview and **software** architecture of GTWS and presents the concept and the mechanism to support multimedia equipment control scheme. (**author** abst.)
DESCRIPTORS: communication; multi-media; communication network; teleconference; groupware; window system; distributed processing; computer network; user interface; protocol; client server system
BROADER DESCRIPTORS: information media; information network; network; conference; **application** program; computer program; **software** ; method; treatment; interface; rule; computer system(hardware); system
CLASSIFICATION CODE(S): IB03000G; JE14000C; ND11010T

24/5/18 (Item 7 from file: 94)
DIALOG(R)File 94:JICST-EPlus

01961126 JICST ACCESSION NUMBER: 93A0982459 FILE SEGMENT: JICST-E
User Interface of Group Tele-Working System: GTWS.
ISHIZAKI TAKESHI (1); KITAHARA CHIHO (1); MORI KENJIRO (1); KINOSHITA SHIGEAKI (2); MIYAMOTO TAKANORI (2)
(1) Hitachi, Ltd., System Development Laboratory; (2) Hitachi, Ltd., Central Res. Laboratory
Joho Shori Gakkai Kenkyu Hokoku, 1993, VOL.93,NO.95(IM-13 GW-4), PAGE.69-76, FIG.6, REF.5
JOURNAL NUMBER: Z0031BAO ISSN NO: 0919-6072
UNIVERSAL DECIMAL CLASSIFICATION: 681.51:007.51 681.3.002+
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Original paper
MEDIA TYPE: Printed Publication
ABSTRACT: We developed the Group Tele-Working system (GTWS), which enables distributed participants to collaborate on their work stations using multimedia information. Multiple conference spaces are represented by the **virtual meeting** room windows and the participant can switch from one conference space to another by selecting the meeting room window. The voice and video are controlled with the change of the meeting rooms. This paper describes the system configuration and **software** architecture of GTWS and presents the concept and the mechanism to support multiple conference spaces. The overview of the experimental results are also presented. (**author** abst.) DESCRIPTORS: user interface; teleconference; cooperative control; computer

network; communication; window system; multi-media
BROADER DESCRIPTORS: interface; conference; control; communication network; information network; network; method; information media
CLASSIFICATION CODE(S): IB03000G; JE14000C

24/5/19 (Item 8 from file: 94)
DIALOG(R)File 94:JICST-EPlus

01913460 JICST ACCESSION NUMBER: 94A0019894 FILE SEGMENT: JICST-E
Proposal of User Interface for Multipoint Group Tele-Working System: GTWS.
KITAHARA CHIHO (1); ISHIZAKI TAKESHI (1); MORI KENJIRO (1); KINOSHITA SHIGEAKI (2)
(1) Hitachi, Ltd., System Development Laboratory; (2) Hitachi, Ltd., Central Res. Laboratory
Denshi Joho Tsushin Gakkai Gijutsu Kenkyu Hokoku(IEIC Technical Report (Institute of Electronics, Information and Communication Enginners), 1993, VOL.93,NO.357(OFS93 25-29), PAGE.7-12, FIG.11, TBL.1, REF.5
JOURNAL NUMBER: S0532BBG
UNIVERSAL DECIMAL CLASSIFICATION: 621.397.004.14 681.3:621.397.3
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Original paper
MEDIA TYPE: Printed Publication
ABSTRACT: We propose **virtual meeting** room user interface for Multipoint Tele-Conference System, called Group Tele-Working System: GTWS. This user interface is based on meeting room metaphor, which is composed of Direct Manipulation Objects: DMO located in meeting room window. DMO are symbolized conference factors, such as participants, conference documents, shared white boards, etc. We examined this user interface in case of four members conference. This paper describes methods of makeing up the user interface for GTWS and consideration of the examination. (**author** abst.)
DESCRIPTORS: groupware; user interface; multi-media; real time processing; **application** program; teleconference; group treatment; computer graphics; virtual reality
BROADER DESCRIPTORS: computer program; **software**; interface; information media; treatment; conference; image technology; technology; computer **application**; utilization
CLASSIFICATION CODE(S): ND12034M; JE04010I

24/5/20 (Item 9 from file: 94)
DIALOG(R)File 94:JICST-EPlus

01499312 JICST ACCESSION NUMBER: 92A0281430 FILE SEGMENT: JICST-E
Special Section on Fundamentals of Next Generation Human Interface.
Exocentric Control of Audio Imaging in Binaural Telecommunication.
COHEN M (1); KOIZUMI N (1)

(1) NTT Human Interface Laboratory, Musashino-shi, JPN
IEICE Trans Fundam Electron Commun Comput Sci(Inst Electron Inf Commun Eng)
, 1992, VOL.E75-A,NO.2, PAGE.164-170, FIG.6, TBL.2, REF.8
JOURNAL NUMBER: F0699CAT ISSN NO: 0916-8508
UNIVERSAL DECIMAL CLASSIFICATION: 621.395 534.8
LANGUAGE: English COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Original paper
MEDIA TYPE: Printed Publication
ABSTRACT: Sound field telecommunication describes a voice communication system, intended to implement a **virtual meeting**, in which participants at distant sites experience the sensation of sharing a single room for conversation. Binaural synthesis reconstructs the sound propagation pattern of a particular room or environment in the vicinity of each ear, which seems appropriate for a personal multimedia environment. Localization cues in spatial hearing comprise both the sink's transfer function and source attenuation. Sink directional cues are captured by binaural head related transfer functions(HRTFs). Source attenuation is modeled as a frequency-independent function of the direction, dispersion, and distance of the source, capturing sensitivity, amplification, and mutual position. Audio windows, aural analogues of video windows, can be thought of as a user interface to binaural sound presentation for a teleconferencing system. Exocentric representation of audio window entities allows manipulation of all teleconferees in a projected egalitarian medium. We are implementing a system that combines dynamically selected HRTFs with dynamically determined source and sink position, azimuth, focus, and size parameters, controlled via iconic manipulation in a graphical window. With such an interface, users may arrange a virtual conference environment, steering the virtual positions of teleconferees. (**author** abst.)
DESCRIPTORS: teleconference; voice communication; auditory localization; binaural hearing; sound field; man-machine system; system interface; computer graphics
BROADER DESCRIPTORS: conference; telecommunication; audibility; field; system; interface; image technology; technology; computer **application**; utilization
CLASSIFICATION CODE(S): ND11030P; BB03050C

01416440 JICST ACCESSION NUMBER: 91A0854638 FILE SEGMENT: JICST-E
Audio Windows for Binaural Telecommunication.
COHEN M (1); KOIZUMI N (1)
(1) NTT Human Interface Laboratory, Tokyo
Denshi Joho Tsushin Gakkai Gijutsu Kenkyu Hokoku(IEIC Technical Report (Institute of Electronics, Information and Communication Enginners), 1991, VOL.91,NO.242(SP91 48-54), PAGE.21-27, FIG.6, TBL.1, REF.9
JOURNAL NUMBER: S0532BBG
UNIVERSAL DECIMAL CLASSIFICATION: 681.3:801.4

LANGUAGE: English COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Original paper
MEDIA TYPE: Printed Publication
ABSTRACT: Sound field telecommunication describes a voice communication system, intended to implement a **virtual meeting**, in which participants at distant sites experience the sensation of sharing a single room for conversation. Binaural synthesis reconstructs the sound propagation pattern of a particular room or environment in the vicinity of each ear, which seems appropriate for a personal multimedia environment. Localization cues in spatial hearing comprise both the sink's transfer function and source attenuation. Sink directional cues are captured by binaural head related transfer functions(HRTFs). Attenuation is modeled as a frequency-independent function of the direction, dispersion, and distance of the source, capturing sensitivity, amplification, and mutual position. Audio windows, aural analogues of video windows, can be thought of as a user interface to binaural sound presentation for a teleconferencing system. Exocentric representation of audio window entities allows manipulation of all teleconferees in a projected egalitarian medium. We have implemented a system that combines dynamically selected HRTFs with dynamically determined source and sink position, azimuth, focus, and size parameters, controlled via iconic manipulation in a graphical window. With such an interface, users may arrange a virtual conference environment, steering the virtual positions of teleconferees. (**author** abst.)
DESCRIPTORS: teleconference; voice communication; working space; stereophony; picture communication; computer graphics; transfer function; icon
BROADER DESCRIPTORS: conference; telecommunication; space; sound; image technology; technology; computer **application**; utilization; function(mathematics); mapping(mathematics); projected image; image; symbol
CLASSIFICATION CODE(S): JE05000E

24/5/22 (Item 11 from file: 94)

01275035 JICST ACCESSION NUMBER: 91A0611044 FILE SEGMENT: JICST-E
A Study of Intelligent Network. Improvement of Voice Quality for Telephone Conference System.
SUZUKI TOSHIAKI (1); NAKAMURA REIJI (1); IWAMOTO YOSHIHARU (1)
(1) Hitachi, Ltd., Totsuka Works
Denshi Joho Tsushin Gakkai Gijutsu Kenkyu Hokoku(IEIC Technical Report (Institute of Electronics, Information and Communication Enginners), 1991, VOL.91,NO.91(SSE91 19-23), PAGE.7-12, FIG.7, TBL.1, REF.4
JOURNAL NUMBER: S0532BBG
UNIVERSAL DECIMAL CLASSIFICATION: 621.394/.395 621.397.004.14
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication
ABSTRACT: **Application** of stereo regeneration method with simple input-output facilities for the high quality telephone conference service is described. With a pair of voice adder, **virtual** space for **meeting** room is realized. Voice level data exchanging methods in each conference equipment for improving on voice quality of distributed conference system are also described. (**author** abst.) DESCRIPTORS: information network; teleconference; video telephone; speech
quality; stereophony; discrete system; communication control; stereophonic perception; intelligent network; telecommunication; communication service
BROADER DESCRIPTORS: network; conference; voice communication; picture communication; transmission performance; communication characteristic; characteristic; sound; system; control; audibility; auditory perception ; perception; stereognosis; form perception; communication network; service
CLASSIFICATION CODE(S): ND11010T; ND12034M

24/5/23 (Item 1 from file: 6)
DIALOG(R)File 6:NTIS

1912920 NTIS Accession Number: DE95015012
Team learning center design principles
Daily, B. ; Loveland, J. ; Whatley, A.
Sandia National Labs., Albuquerque, NM.
Corp. Source Codes: 068123000; 9511100
Sponsor: Department of Energy, Washington, DC.
Report Number: SAND-95-1244
Jun 95 42p
Languages: English
Journal Announcement: GRAI9601; ERA9554
Sponsored by Department of Energy, Washington, DC.
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NTIS Prices: PC A03/MF A01
Country of Publication: United States
Contract Number: AC04-94AL85000
This is a preliminary report of a multi-year **collaboration** of the authors addressing the subject: Can a facility be designed for **team** learning and would it improve the efficiency and effectiveness of **team** interactions. **Team** learning in this context is a broad definition that covers all activities where small to large groups of people come together to work, to learn, and to share through **team** activities. **Multimedia**, networking, such as World Wide Web and other tools, are greatly enhancing the capability of individual learning. This paper addresses the **application** of technology and design to facilitate group or **team** learning. Many organizational meetings need

tens of people to come together to do work as a large group and then divide into smaller subgroups of five to ten to work and then to return and report and interact with the larger group. Current facilities were not, in general, designed for this type of **meeting**. Problems with current facilities are defined and a preliminary design solution to many of the identified problems is presented.
Descriptors: *Buildings; *Communications; *Learning; Aesthetics; Behavior ; Design; Environmental Engineering; Optimization
Identifiers: EDB/550100; EDB/420200; NTISDE
Section Headings: 92A (Behavior and Society--Job Training and Career Development); 77GE (Nuclear Science and Technology--General)

24/5/24 (Item 1 from file: 144)
DIALOG(R)File 144:Pascal

13639940 PASCAL Number: 98-0346122
Virtual meetings with desktop conferencing
DUTTA ROY A
Journal: IEEE Spectrum, 1998, 35 (7) 47-56
ISSN: 0018-9235 CODEN: IEESAM Availability: INIST-222 J
Number of Refs.: 4 Refs.
Document Type: P (Serial) ; A (Analytic)
Country of Publication: United States
Language: English
Teleconferencing has come along a way since its early days as little more than three-way calling services over the telephone. Using communications protocol of the Internet, desktop conferencing can incorporate audio, video, shared documents and engineering drawings, whiteboard for diagrams, and/or text chat for meetings held in a relative comfort of the office. Instead of boarding a plane for project meeting, some people can fire up their PC and log in to a **virtual meeting** which boils down to collaborative computing on desktop or laptop computers, with documents, spreadsheets, slides, or even freehand drawings shared by persons physically removed from one another.

English Descriptors: Virtual meetings; Desktop conferencing systems; Internet; Intranet; **Reviews**; Personal computers; Virtual reality; Wide area networks; Local area networks; Network protocols; Interfaces (computer); Interactive computer systems; Real time systems; Voice/data communication systems; Information services; Computer **software**; Algorithms; Teleconferencing

French Descriptors: Article synthese; Ordinateur personnel; Realite virtuelle; Reseau longue distance; Reseau local; Protocole reseau; Interface(ordinateur); Systeme informatique conversationnel; Systeme temps reel; Systeme communication voix et donnee; Service information; Logiciel; Algorithme; Teleconference

Classification Codes: 001D04B02H1; 001D03J07; 001D02B; 001D03J; 001D03J03;
001D04B

24/5/25 (Item 1 from file: 95)
DIALOG(R)File 95:TEME-Technology & Management

00931971 I95104266362
Designing hypermedia: a **collaborative** activity
(Der Entwurf von Hypermedia-Dokumenten: eine Gruppenaktivitaet)
Stritz, NA
GMD Germany
Communications of the ACM, v38, n8, pp70-71, 1995
Document type: journal article Language: English
Record type: Abstract
ISSN: 0001-0782

ABSTRACT:
While approaches exist for designing hypermedia applications with respect to content, structure and presentation, little attention has been paid to the actual process that individual designers incur or that groups undergo in **collaborative** design. Large and complex applications usually require a **team** of content providers, structure and value-adding editors, scenario and script writers, graphic, layout and interface designers, among others. We focus on two aspects of **collaboration** in a hypermedia design **team**: support for authors deciding jointly on content, structure and presentation; and group **meeting** support. The **collaborative** support we provide derives from investigating the cognitive and social aspects of both distributed cooperative authoring of complex hyperdocuments and the face-to-face staff meetings of a hypermedia newspaper's editorial **team**. In the case of cooperative authoring, we distinguish three modes of **collaboration**: individual, loosely coupled and tightly coupled work, with corresponding modes in the SEPIA hypermedia authoring environment. Our second focus concerns adequate computer-based support for group meetings of design teams, in which brainstorming, problem exploration and decision-making play a role.

DESCRIPTORS: SYSTEMS ANALYSIS; DECISION MAKING; AUTOMATIC DOCUMENTATION; **SOFTWARE** TOOLS; GROUP WORK; GROUPWARE--**SOFTWARE**; HYPERMEDIA; PRESENTATION
IDENTIFIERS: AUTHORING SYSTEMS; HYPERMEDIA APPLICATIONS DESIGN; **COLLABORATIVE** DESIGN; HYPERMEDIA DESIGN **TEAM**; COMPLEX HYPERDOCUMENTS; CONTENT; STRUCTURE; GROUP **MEETING** SUPPORT; COGNITIVE ASPECTS; SOCIAL ASPECTS; DISTRIBUTED COOPERATIVE AUTHORING; FACE TO FACE STAFF MEETINGS; NEWSPAPER EDITORIAL **TEAM**; INDIVIDUAL WORK; LOOSELY COUPLED WORK; TIGHTLY COUPLED WORK; SEPIA HYPERMEDIA AUTHORING ENVIRONMENT; BRAINSTORMING; PROBLEM EXPLORATION; AUTORENSYSTEM--(**MULTIMEDIA**); Hypermedia-Dokument; Entwurf

24/5/26 (Item 1 from file: 256)
DIALOG(R)File 256:TecInfoSource

00158273 DOCUMENT TYPE: Review

PRODUCT NAMES: Media Server S8720 (253667); Media Gateway G650 (253679); HiPath 4000 (132861); OmniPCX Enterprise (159166); IP PBX (807001)

TITLE: High-End IP-PBXs: VOIP Powerhouses
AUTHOR: Mier, Edwin E; Mier, David C; Tarpley, Robert B; Mosco, Anthony P
SOURCE: Business Communications Review, v36 n1 p30(9) Jan 2006
ISSN: 0162-3885
HOMEPAGE: http://www.bcr.com

FILE SEGMENT: Review
RECORD TYPE: Review

Avaya Media Server S8720 and Media Gateway G650, Siemensk HiPath 4000, ShoreTel's ShoreTel 6, 3Com's VCX IP-Telephony, and Alcatel's OmniPCX Enterprise are **reviewed** high-end IP private branch exchanges (PBXs) with robust Voice over IP (VoIP) abilities. The Avaya S8720,G650 is rated best for the second year in a row. The Avaya configuration evaluated included the S8720 Media Server (a high-end call controller that supports up to 12,000 IP stations), the G650 gateway, and applications that include **Meeting** Exchange for Web **collaboration** and conferencing as well as **multimedia** desktop. Alcatel e-ND submitted OmniPCX Enterprise with the 6.2 **software** release and a special new version that expands the system capacity to 15,000 IP stations. ShoreTel 6 supports up to 10,000 total ports (a mixture of IP stations and trunks) and the most recent versions of Personal Call Manager, which is a suite of desktop applications. Siemens submitted HiPath 4000 3.0 with support for as many as 12,000 combined IP stations and trunk channels and included the OpenScape **collaboration** and conferencing suite. The VCX IP Telephony system release 7 from 3Com is a crucial component of the 3Com Convergence **Application** Suite and features all-Session Initiation Protocol (SIP)-based IP telephony via the Convergence Client **application** suite. 3Com is rated the best for distributed survivability, and the best performance award goes to Siemens, The easiest to use system is the ShoreTel 6 system. Avaya S8720 and G650 won for architecture with solid and well designed scalability, survivability, and distributed networking.

COMPANY NAME: Avaya Inc (666181); Siemens Communications Inc (762202); Alcatel (386073); TecTerns (999999)
SPECIAL FEATURE: Buyers Guides, Tables
DESCRIPTORS: Communications Equipment; Computer Telephony; VoIP (Voice over IP)
REVISION DATE: 20061200

24/5/27 (Item 2 from file: 256)

00156739 DOCUMENT TYPE: Review

PRODUCT NAMES: Avaya **Meeting** Exchange (246547); MCS 5100 (230651); Mitel Your Assistant 3.1 (181498)

TITLE: Apps: Making The Most Of IP-Telephony
AUTHOR: Mier, Edwin E
SOURCE: Business Communications Review, v35 n9 p24(7) Sep 2005
ISSN: 0162-3885
HOMEPAGE: http://www.bcr.com

FILE SEGMENT: Review
RECORD TYPE: Product Analysis

Avaya's Avaya **Meeting** Exchange, Nortel's MSC 5100, Mitel's Mitel Your Assistant 3.1, and Siemens HiPath OpenScape v2.0 are IP-telephone products for which vendorsk jdirection, speed, and coursek in the area of advanced **application** offerings are discussed. IP-telephony suppliers were asked to participate in the third annual jBusiness Communications **Reviewk** and Miercom examination of IP-telephony-enabled advanced applications. The participants were asked to show off their latest **application** packages and any other new, one-of-a-kind, and special offerings in the areas of personal productivity, audio, **multimedia**, on the fly, and scheduled conferencing, **collaboration** using one or multiple media, advanced speech processing for natural language speech interaction, and mobility. As a general trend, the new products showed closer **application**-infrastructure linking, less attention to softphones, more attention to the concept of the associated hard phone, and applications that will run on the most recent IP phones. The most compelling new developments from Avaya were in the area of mobility and wireless, including a Symbian-based client that delivers the top 20 Avaya IP-PBX features to users of Nokia Series 60 cellphones, a new softphone **application** that runs on Windows Pocket PCs. The Motorola-made dual phone supports 802.11a Wi-Fi locally and is also a GSM (Global System for Mobile Communication)-based cellphone. Also provided is enhancement to Extension to Cellular with Speech Access based on the Avaya Unified Communications voice processing package. An important optional add-on to Your Assistant is the **Collaboration** Module, a full-functioned server-based **collaboration** and conferencing package. The MCS 5100 server **software** scales effectively, and the MCS 5100 suite also has very effective **multimedia** features. Siemens OpenScale 2.0 is an optional add-on to Microsoft's Live Communications Server and is very closely integrated with LCS. All the required **software**, which includes many Microsoft components, is Session Initiation Protocol (SIP)-based and is not linked to any specific IP-PBX infrastructure.

COMPANY NAME: Avaya Inc (666181); Nortel Networks Corp (667765); Mitel Networks Corp (531111)

SPECIAL FEATURE: Buyers Guides, Charts
DESCRIPTORS: Communications Convergence; Communications Equipment; Computer Telephony; Conferencing; Unified Messaging; VoIP
REVISION DATE: 20061100

24/5/28 (Item 3 from file: 256)
DIALOG(R)File 256:TecInfoSource

00154725 DOCUMENT TYPE: Review

PRODUCT NAMES: Macromedia Breeze **Meeting** Central 5 (234685); Microsoft Office Live **Meeting** 2005 (187208); WebEx **Meeting** Center 7 (744506)

TITLE: It's Like Being There, Virtually
AUTHOR: Heck, Mike
SOURCE: InfoWorld, v27 n19 p24(6) May 9, 2005
ISSN: 0199-6649
HOMEPAGE: http://www.infoworld.com

FILE SEGMENT: Review
RECORD TYPE: Product Comparison

Macromedia's Macromedia Breeze **Meeting** Central 5, Microsoft Office Live **Meeting** 2005, and WebEx Communicationsk WebEx **Meeting** Center are **reviewed** real-time **collaboration** services. Flash-based Breeze 5 gets excellent marks, especially for features, ease of use, and integration. The hosted service allows users to **collaborate** in Web meetings and to manage large events. They can deliver PowerPoint presentations as required with audio and can construct online training systems that include features for course and content management. Breeze has an intuitive user interface (UI) that makes **meeting** participation easy. **Meeting** hosts benefit from many customization choices. Microsoft Live **Meeting** is hosted remotely and supports Windows, Macintosh OS 10.3, and Solaris 9. Functionality is not uniform for the three operating systems (OSs). With Office Live **Meeting** 2005, conferencees in small teams can work together, and organizations can provide training. Live **Meeting** 2005 is very scalable and has excellent performance. Thousands of attendees can participate in online events. New features ease scheduling of meetings. Regional and global enterprises gain the advantages of integrated Voice over IP (VoIP) audio broadcasting, straightforward presentation controls, and more localized versions. WebEx **Meeting** Center 7 excels for features, integration, performance, and value, and ease of use is good. The third generation **collaboration** **application** is meant to meet specific needs, and an efficient interface makes the Web **meeting** experience superior. Professional **multimedia** presentations can be provided, and the enhanced MediaTone backbone network provides toll-free audio conferencing in 30 countries. MediaTone **application** programming interfaces (APIs)

integrate WebEx applications into CRM, call center, and electronic learning systems.
COMPANY NAME: Adobe Systems Inc (394173); Microsoft Corp (112127); WebEx Communications Inc (650901)
SPECIAL FEATURE: Charts, Buyers Guide
DESCRIPTORS: **Collaborative** Commerce; Conferencing; Content Management; Presentations; Training
REVISION DATE: 20061100

24/5/29 (Item 4 from file: 256)
DIALOG(R)File 256:TecInfoSource

00153731 DOCUMENT TYPE: Review
PRODUCT NAMES: Virtual Meetings (813129)

TITLE: Director's Cut: Board members are turning to specialized **software**...
AUTHOR: Mello, John P, Jr
SOURCE: CFO, v20 n9 p26(2) Jul 2004
ISSN: 8756-7113
HOMEPAGE: http://www.cfonet.com

FILE SEGMENT: Review
RECORD TYPE: Product Analysis

Specialized **software**, including Directorks Desk, is increasingly used by company board members to assist in affairs management. In the evolving category, products that streamline board communication and increase board interaction continue to emerge. A user is Tom Lienhard, who sits on two boards of directors and has to work with carry-over agenda items each month. Directorks Desk, which allows meetings to be conducted online, is an online **software** package that can solve many logistical problems. Others including BoardVantage, also offer **virtual meeting** places for board members, as well as specialized document management and communication tools. A suite from the Board Institute assists directors in evaluating their own performance. In a matter of five years, says an expert, most companies will use some type of board management system. Jay Lorsch, **author** and professor at Harvard Business School, says use of IT to improve board communication is a sensible extension of current practice, since many CEOs communicate through letters to board members in odd months. Technology offers a useful way to stay in touch, agrees Stuart Robbins of the CIO Collective. The Board Institute also offers a Web-based solution that benchmarks the performance and effectiveness of audit, compensation, and governance committees of a board.

COMPANY NAME: TecTerns (999999)
SPECIAL FEATURE: Charts
DESCRIPTORS: Community Building; Conferencing; Document Management;

REVISION DATE: 20061200

24/5/30 (Item 5 from file: 256)
DIALOG(R)File 256:TecInfoSource

00151264 DOCUMENT TYPE: Review

PRODUCT NAMES: Citrix MetaFrame Access Suite (161951)

TITLE: Citrix Moves Beyond Thin Clients
AUTHOR: Yang, S Jae
SOURCE: PC Magazine, v23 n2 p46(1) Feb 3, 2004
ISSN: 0888-8509
HOMEPAGE: http://www.pcmag.com

FILE SEGMENT: Review
RECORD TYPE: Review
GRADE: B

Citrix Systems' MetaFrame Access Suite moves the firm beyond being a thin-client provider, and provides a good suite of applications for accessing enterprise-scale computing resources. Customers can buy only the applications they need, rather than the entire suite. The Presentation Server is a thin-client-based **application** that supports the other applications. It provides remote access to Windows 2000 or 2003 Servers. It now loads faster than previous versions, although **multimedia** playback still needs improvement. The MetaFrame Secure Access Manager manages who has access and to which applications and is very easy to set up. It only works with Windows-based clients using Internet Explorer 5 or later, however. It is an inexpensive, effective alternative to VPN-based remote access. Conferencing Manager is a good **collaboration** tool that lets **team** members work on the same document, and lets all users in a **meeting** have access to the applications. Password Manager lets users manage the different passwords they need to access corporate applications more effectively.

PRICE: $599

COMPANY NAME: Citrix Systems Inc (502545)
SPECIAL FEATURE: Screen Layouts
DESCRIPTORS: Enterprise **Application** Integration; File Transfer; Network **Software**; Remote Network Access; Windows NT/2000; Windows Server 2003
REVISION DATE: 20040530

24/5/31 (Item 6 from file: 256)
DIALOG(R)File 256:TecInfoSource

00142912 DOCUMENT TYPE: Review

PRODUCT NAMES: Lotus Notes 6 (550418); Domino 6 (622419); IBM Lotus Sametime 3.0 (725668)

TITLE: Deal with meetings: Domino 6, Sametime 3 bolster collaboration...
AUTHOR: Connolly, P J
SOURCE: InfoWorld, v24 n47 p31(2) Nov 25, 2002
ISSN: 0199-6649
HOMEPAGE: http://www.infoworld.com

FILE SEGMENT: Review
RECORD TYPE: Product Analysis
GRADE: Product Analysis, No Rating

IBM's Lotus Notes 6, Domino 6, and Sametime 3.0 are **reviewed** collaboration products. Lotus Notes 6 and Domino 6, which provide new client features that increase user productivity, get good marks overall, with very good marks for scalability, security, suitability, support, training, and overall value. Innovation and interoperability are good, while ease of use and implementation are average. Lotus Notes 6 and Domino 6 have easier to use management tools that allow more servers to be managed by fewer people. Policy- based management is easier, while mail relay and replication features are improved. IBM/Lotus provides over 1,000 pages of good documentation, but more illustrations are needed. IBM continues to maintain a Notes client for the Macintosh, but a Jaguar-compatible version will not be available until 2003. Sametime 3.0, a flexible tool for creating and managing **virtual meeting** spaces, allows users to store creative output as documents, whiteboards, and other formats. The Sametime Connect client runs as a standalone **application** or from the browser and, with administrative rights, can be used to some extent with AOL Instant Messenger. A Windows OSR2-based machine is required with Internet Explorer 4.01 or later, and Netscape 4.5 and 4.7 browsers are also supported. Data-sharing features are controlled by the **moderator**, and the server is extremely configurable. Sametime provides a secure **virtual meeting** environment.

COMPANY NAME: IBM Corp (351245)
SPECIAL FEATURE: Tables Charts
DESCRIPTORS: Conferencing; E-Mail; Groupware; Instant Messaging; Notes/Domino
REVISION DATE: 20031030

24/5/32 (Item 7 from file: 256)
DIALOG(R)File 256:TecInfoSource

00141660 DOCUMENT TYPE: Review

PRODUCT NAMES: Groove Workspace 2.0 Pro (106135)

TITLE: Groove Workspace 2.0 Professional
AUTHOR: Miller, Ron
SOURCE: eContent, v25 n10 p38(3) Oct 2002
ISSN: 0162-4105
HOMEPAGE: http://www.econtent.com

FILE SEGMENT: Review
RECORD TYPE: Review
GRADE: A

Groove Networks' Groove Workspace 2.0 Pro, an excellent online collaboration toolset, is the enterprise client version of Groove, and provides better tools and more intuitive interaction with such programs as Microsoft Outlook than the first release. However, the interface still needs work and could still be easier to use. Unlike competing products, including eRoom, Groove does not use Web pages for online meetings, but instead uses the Transceiver desktop **application**. Therefore, users do not have to be linked to the Internet to gain access to information in a workspace. For online activity, the workspace runs with a peer-to-peer (P2P) connection via a relay server (which can either be provided by Groove or set up behind a company firewall) to permit offline connections. The workspace is updated each time users connect to the workspace online. Security consists of 192-bit encryption, which makes it impossible to get information on the server without authorization. The workspace is set up by the project manager as a **virtual meeting** place where members meet and collaborate. The project manager invites others to join through e-mail. Communication tools include a Chat tool (with content saved in the workspace, with copy/paste supported) and a Talk Tool. Other features described include simultaneous document **review**, the Forms tool for creating customized forms, and the Project Management tool.

PRICE: $99

COMPANY NAME: Microsoft Corp (112127)
SPECIAL FEATURE: Screen Layouts Charts Tables
DESCRIPTORS: Conferencing; Groupware; Intranets; Meetings & Conventions;
Peer to Peer Networking
REVISION DATE: 20021230

26/5/1 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

07868703 E.I. No: EIP97113914523
Title: Generic model for fine grained configuration management including version control and traceability
Author: Lindsay, Peter; Liu, Yaowei; Traynor, Owen

Corporate Source: Univ of Queensland, St. Lucia, Aust
Conference Title: Proceedings of the 1997 Australian Software Engineering Conference, ASWEC'97
Conference Location: Sydney, Aust Conference Date: 19970929-19971002
Sponsor: IEEE
E.I. Conference No.: 47257
Source: Proceedings of the Australian Software Engineering Conference 1997. IEEE Comp Soc, Los Alamitos, CA, USA,97TB100172. p 27-36
Publication Year: 1997
CODEN: 002711
Language: English
Document Type: CA; (Conference Article) Treatment: G; (General Review)
Journal Announcement: 9801W1
Abstract: This paper describes the implementation of a prototype system that supports fine-grained configuration and version management. The development has been undertaken in the context of providing trusted support for high-integrity software development. The starting point of this paper is a formal specification of the consistency and completeness criteria that our system must meet. The main issues are illustrated using a simple example: a system which supports the evolution of requirements and design documents and maintains the relationships between these two artifacts. The prototype was developed using a sophisticated object-oriented database system. Finally we draw conclusions about the integration of fine-grained configuration and version management facilities into a single framework. (Author abstract) 20 Refs.
Descriptors: ***Software** engineering; **Records** management; **Specifications**; **Database systems**; Object oriented programming; Information retrieval systems
Identifiers: Software configuration management; Version control; High integrity software engineering
Classification Codes:
723.1 (Computer Programming); 912.2 (Management); 902.2 (Codes & Standards); 723.3 (Database Systems); 903.3 (Information Retrieval & Use)
723 (Computer Software); 912 (Industrial Engineering & Management); 902 (Engineering Graphics & Standards); 903 (Information Science)
72 (COMPUTERS & DATA PROCESSING); 91 (ENGINEERING MANAGEMENT); 90 (GENERAL ENGINEERING)

26/5/2 (Item 1 from file: 99)
DIALOG(R)File 99:Wilson Appl. Sci & Tech Abs

1774984 H.W. WILSON RECORD NUMBER: BAST98073592
ADEPT--the Advanced Database Environment for Planning and Tracking
Schultz, Thomas A;
Bell Labs Technical Journal v. 3 no3 (July/Sept. '98) p. 3-9
DOCUMENT TYPE: Feature Article ISSN: 1089-7089 LANGUAGE: English
RECORD STATUS: Corrected or revised record

ABSTRACT: The Advanced Database Environment for Planning and Tracking

(ADEPT) is a system that provides the ability to define and manage process definitions. These predefined definitions can be instantiated to create project plans. In managing such plans, ADEPT ensures adherence to predefined process definitions. Unlike most commercial project planning systems, project plans in ADEPT can include information that is tracked across multiple projects. In addition, ADEPT provides the ability to track other kinds of project details besides simple task information and milestone dates. It supports both operational (that is, day-to-day) management of single projects and strategic management of information that crosses project boundaries. It was built on top of a commercial client-server relational database system and uses the standard Structured Query Language (SQL) to model process definitions as object-oriented semantic networks. ADEPT features include real-time reporting, generation of HyperText Markup Language (HTML) reports, report subscription, tracking of quality **records**, e-mail notification of **database** transactions, and authorization access control. Reprinted by permission of the publisher.

DESCRIPTORS: Software engineering; Project management; **Software** requirements **specifications**;

29/5/2 (Item 1 from file: 95)
DIALOG(R)File 95:TEME-Technology & Management

00658009 I93010112927
Formal approach to hypertext system based on object-oriented database system
(Ein formaler Ansatz fuer ein Hypertext-System auf Basis eines objektorientierten Datenbanksystems)
Hitchcock, P; Wang, B
Dept. of Comput. Sci., York University, Heslington, UK
Information and Software Technology, v34, n9, pp573-592, 1992
Document type: journal article Language: English
Record type: Abstract
ISSN: 0950-5849

ABSTRACT:
InterSect is a prototype hypertext system designed to meet the requirements of complex documentation environments. It differs from conventional hypertext systems in that its nodes can behave like **records** in a **database**, as well as participating in normal hypertext links. This helps to overcome some of the problems, such as getting lost in hyperspace, exhibited by first-generation hypertext systems. The object-oriented

database DAMOKLES is used in the prototype. The paper describes the use of the formal language Z to specify the InterSect system.

DESCRIPTORS: FORMAL **SPECIFICATION**; DESCRIPTION LANGUAGES; OBJECT ORIENTED **PROGRAMMING**; DATABASE MANAGEMENT SYSTEM; AUTOMATIC DOCUMENTATION; HYPERMEDIA; OBJECT ORIENTED DATABASES; OBJECT ORIENTED LANGUAGES
IDENTIFIERS: Z LANGUAGE; FORMAL SPECIFICATION LANGUAGE; INTERSECT; HYPERTEXT SYSTEM; DOCUMENTATION ENVIRONMENTS; HYPERTEXT LINKS; HYPERSPACE; OBJECT ORIENTED DATABASE; DAMOKLES; objektorientierte Datenbank; Hypertext-System

33/5/1 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

10135392 E.I. No: EIP04498694357
Title: Building an ethics in computing website using **peer review**
Author: Gehringer, Edward F.
Corporate Source: Department of Electrical Engineering North Carolina State University, Raleigh, NC, United States
Conference Title: 2001 ASEE Annual Conference and Exposition: Peppers, Papers, Pueblos and Professors
Conference Location: Albuquerque, NM, United States Conference Date: 20010624-20010627
Sponsor: American Society for Engineering Education, ASEE
E.I. Conference Number: 63708
Source: ASEE Annual Conference Proceedings 2001 ASEE Annual Conference and Exposition: Peppers, Papers, Pueblos and Professors 2001.
Publication Year: 2001
CODEN: ACOPDW ISSN: 0190-1052
Language: English
Document Type: CA; (Conference Article) Treatment: T; (Theoretical)
Journal Announcement: 0412W2
Abstract: An Ethics in Computing Website covering almost 100 topics has been developed using **peer**-reviewed student contributions. Students in the author's one-credit Ethics in Computing course select a topic to research from a list provided by the instructor, or propose a topic of their own choosing. Their contributions are then reviewed, and ultimately graded, by three other students taking the course. The best-reviewed pages are then incorporated into the Website. However, most of the work of maintaining the site is performed by a set of independent-study projects during the 10-week summer session. Each student chooses a set of topics, and completes one topic every two weeks. Each submission is subjected to two rounds of **review**, one round per week. Some of the topics are new; others are merely updates to existing pages. The amount of work required on each topic is ranked from 1 to 5, with 5 being the highest. Each student is expected to complete topics with a set total rank, usually about 15. In addition to researching topics, each student chooses one

"special job," such as improving the graphics, installing a search engine, or developing a set of style guidelines. The project can be supervised by graduate students, who undertake the responsibility of assigning work to students and integrating the work into the site. Benefits of the project include (i) giving the students an in-depth look at several different ethical issues, (ii) constructing a resource that has been used by instructors around the world, and (iii) providing a low-overhead mechanism for adding another course to the curriculum. This methodology should be applicable to courses involving professional issues in all areas of engineering. 5 Refs.

Descriptors: *Computer aided instruction; Engineering education; **Software engineering**; Websites; Project management; Search engines; Students; Curricula; Professional aspects

Identifiers: Ethics enhancement; Computing courses

Classification Codes:

723.5 (Computer Applications); 901.2 (Education); 723.1 (Computer Programming); 912.2 (Management); 901.1 (Engineering Professional Aspects)

723 (Computer Software, Data Handling & Applications); 901 (Engineering Profession); 912 (Industrial Engineering & Management)

72 (COMPUTERS & DATA PROCESSING); 90 (ENGINEERING, GENERAL); 91 (ENGINEERING MANAGEMENT)

33/5/4 (Item 4 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

08868673 E.I. No: EIP01326604185

Title: Quantitative measurements of the influence of participant roles during **peer review** meetings

Author: D'Astous, P.; Robillard, P.N.; Detienne, F.; Visser, W.

Corporate Source: Ecole Polytechnique de Montreal, Montreal H3C 3A7, Canada

Source: Empirical Software Engineering v 6 n 2 June 2001. p 143-159

Publication Year: 2001

CODEN: ESENFW ISSN: 1382-3256

Language: English

Document Type: JA; (Journal Article) Treatment: T; (Theoretical)

Journal Announcement: 0108W2

Abstract: **Peer review** meetings (PRMs) are formal meetings during which peers systematically analyze artifacts to improve their quality and report on non-conformities. This paper presents an approach based on protocol analysis for quantifying the influence of participant roles during PRMs. Three views are used to characterize the seven defined participants roles. The project view defines three roles: supervisor, procedure expert and developer. The meeting view defines two roles: author and reviewer, and the task view defines the roles reflecting direct and indirect interest in the artifact under **review**. The analysis, based on log-linear modeling, shows that **review** activities have different patterns, depending on their focus: form or content. The influence of each

role is analyzed with respect to this focus. Interpretation of the quantitative data leads to the suggestion that PRMs could be improved by creating three different types of reviews, each of which collects together specific roles: form **review**, cognitive synchronization **review** and content **review**. 22 Refs.
Descriptors: ***Software engineering**; Project management; Societies and institutions; Data communication systems; Mathematical models
Identifiers: **Peer review** meetings; Participant roles; Formal technical **review**; Log linear modeling
Classification Codes:
901.1.1 (Societies & Institutions)
723.1 (Computer Programming); 912.2 (Management); 901.1 (Engineering Professional Aspects); 921.6 (Numerical Methods)
723 (Computer Software, Data Handling & Applications); 912 (Industrial Engineering & Management); 901 (Engineering Profession); 921 (Applied Mathematics)
72 (COMPUTERS & DATA PROCESSING); 91 (ENGINEERING MANAGEMENT); 90 (ENGINEERING, GENERAL); 92 (ENGINEERING MATHEMATICS)

33/5/5 (Item 5 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

08645425 E.I. No: EIP00095308336
Title: Characterizing implicit information during **Peer Review** Meetings
Author: d'Astous, Patrick; Robillard, Pierre N.
Corporate Source: Ecole Polytechnique de Montreal, Montreal, Que, Can
Conference Title: 2000 International Conference on Software Engineering
Conference Location: Limerick, Ireland Conference Date: 19000604-19000611
Sponsor: IEEE Computer Society; ACM SIGSOFT; ICS
E.I. Conference Number: 57192
Source: Proceedings - International Conference on Software Engineering 2000. IEEE, Los Alamitos, CA, USA. p 460-466
Publication Year: 2000
CODEN: PCSEDE ISSN: 0270-5257
Language: English
Document Type: CA; (Conference Article) Treatment: G; (General Review)
Journal Announcement: 0010W2
Abstract: Disciplines, like **software engineering**, evolve over time by studying some practices and feeding back those results to improve the practice. The empirical approach presented in this paper is used to analyze the nature of the information shared during **Peer Review** Meetings held in industrial **software engineering** project. The results obtained show that although a PRM is categorized as a verification practice, it is also a golden opportunity for project personnel to share information about technical solutions, a decision's rationale or quality guidelines. PRMs contribution is not restricted to the rapid detection of anomalies; they also provide the opportunity for project team members to

share implicit information. PRM efficiency cannot solely be measured through an anomaly detection rate. (Author abstract) 16 Refs.
Descriptors: *Computer aided **software engineering**; Computer simulation; Human computer interaction; Petri nets; Database systems; Computer supported cooperative work
Identifiers: Collaborative software development; **Peer review** meeting
Classification Codes:
723.1 (Computer Programming); 723.5 (Computer Applications); 722.2 (Computer Peripheral Equipment); 921.4 (Combinatorial Mathematics, Includes Graph Theory, Set Theory); 723.3 (Database Systems)
723 (Computer Software); 722 (Computer Hardware); 921 (Applied Mathematics)
72 (COMPUTERS & DATA PROCESSING); 92 (ENGINEERING MATHEMATICS)

33/5/6 (Item 6 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

08351261 E.I. No: EIP99094771154
Title: Open source OSs challenge proprietary systems for control
Author: Dalrymple, Phil
Corporate Source: MDT Software, Alpharetta, GA, USA
Source: I and CS Instrumentation and Control Systems v 72 n 5 1999. p 47-51
Publication Year: 1999
CODEN: ICSYFX ISSN: 1074-2328
Language: English
Document Type: JA; (Journal Article) Treatment: T; (Theoretical)
Journal Announcement: 9910W3
Abstract: Open source software (OSS) promotes software reliability and quality by supporting independent **peer review** and rapid evolution of source code. To be certified as open source, the license of a program must guarantee the right to read, redistribute, modify, and use it freely. The advantages and disadvantages, and some of the related hardware/technical support issues for OSS, are presented. 2 Refs.
Descriptors: ***Software engineering**; Computer operating systems; Programmable logic controllers; Computer hardware; Computer systems programming; Response time (computer systems); CD-ROM
Identifiers: Release management; Open source software (OSS); Software reliability; Software package Linux
Classification Codes:
723.1 (Computer Programming); 732.1 (Control Equipment); 722.4 (Digital Computers & Systems); 722.1 (Data Storage, Equipment & Techniques)
723 (Computer Software); 722 (Computer Hardware); 732 (Control Devices)
72 (COMPUTERS & DATA PROCESSING); 73 (CONTROL ENGINEERING)

33/5/7 (Item 7 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

08317643 E.I. No: EIP99074724187
Title: Process control for error-free software: a software success story
Author: Tackett, Buford D.; Van Doren, Buddy
Corporate Source: ITT Industries, Colorado Springs, CO, USA
Source: IEEE Software v 16 n 3 1999. p 24-29
Publication Year: 1999
CODEN: IESOEG ISSN: 0740-7459
Language: English
Document Type: JA; (Journal Article) Treatment: G; (General Review)
Journal Announcement: 9909W1
Abstract: The State-Based Development Process, an approach based on systematic design and **peer review**, was developed to reduce the risk of producing a poor-quality, late product. Using this approach, a small team at ITT Industries successfully created an automated tracking and monitoring system (Atams) under high schedule and operational pressure for the North America Aerospace Defense Command. 3 Refs.
Descriptors: ***Software engineering***; Process control; Systems analysis; Command and control systems; Missiles; Project management; Scheduling; Engineers; Inspection; Quality assurance
Identifiers: Error free software; State based development process; Development item; Missile warning system
Classification Codes:
723.1 (Computer Programming); 731.1 (Control Systems); 654.1 (Rockets & Missiles); 912.2 (Management); 912.4 (Personnel); 913.3 (Quality Assurance & Control)
723 (Computer Software); 731 (Automatic Control Principles); 654 (Rockets & Rocket Propulsion); 912 (Industrial Engineering & Management); 913 (Production Planning & Control)
72 (COMPUTERS & DATA PROCESSING); 73 (CONTROL ENGINEERING); 65 (AEROSPACE ENGINEERING); 91 (ENGINEERING MANAGEMENT)

33/5/8 (Item 8 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

08067780 E.I. No: EIP98074294941
Title: Toolset to support the construction and animation of formal specifications
Author: Morrey, Ian; Siddiqi, Jawed; Hibberd, Richard; Buckberry, Graham
Corporate Source: Sheffield Hallam Univ, Sheffield, UK
Source: Journal of Systems and Software v 41 n 3 Jun 1998. p 147-160
Publication Year: 1998
CODEN: JSSODM ISSN: 0164-1212
Language: English
Document Type: JA; (Journal Article) Treatment: A; (Applications); T; (Theoretical)

Journal Announcement: 9809W3

Abstract: Model-based specification languages, in particular Z, have been widely used to provide a precise and unambiguous statement of the proposed system as perceived by the developer. However, for many complex specifications, developers cannot themselves be sure about the `intended behaviour' of the specification constructed. This paper reports on an approach and toolset that enables a developer to construct a Z specification using the wiZe editor, demonstrate its properties by transforming it into an executable form using the ZAL animation system, and explore its adequacy by animating a variety of scenarios. The application of the approach and toolset is demonstrated on a specification of a telephone network to illustrate that specification validation could be carried out incrementally during development through investigative scenarios to assess the adequacy of the specification. It is claimed that this interaction, when used in **peer review** or by the individual developer, can provide enhanced accessibility, a better understood and possibly an improved specification. (Author abstract) 28 Refs.

Descriptors: *Computer aided **software engineering**; Computer hardware description languages; File editors; Animation; Telecommunication networks; Rapid prototyping; Formal languages

Identifiers: Formal specifications

Classification Codes:

723.1.1 (Computer Programming Languages)

723.1 (Computer Programming); 723.5 (Computer Applications); 723.2 (Data Processing); 721.1 (Computer Theory, Includes Formal Logic, Automata Theory, Switching Theory, Programming Theory)

723 (Computer Software); 716 (Radar, Radio & TV Electronic Equipment); 721 (Computer Circuits & Logic Elements)

72 (COMPUTERS & DATA PROCESSING); 71 (ELECTRONICS & COMMUNICATIONS)

33/5/13 (Item 13 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

06105644 E.I. Monthly No: EIM9108-037674

Title: **Software engineering** applied to programmable controller software design.

Author: French, Allen C.

Corporate Source: Adolph Coors Co, Golden, CO, USA

Conference Title: Proceedings of the ISA/89 International Conference and Exhibit Part 3 (of 4)

Conference Location: Philadelphia, PA, USA Conference Date: 19901022

E.I. Conference Number: 13785

Source: Advances in Instrumentation, Proceedings v 44 pt 3. Publ by ISA Services Inc, Research Triangle Pk, NC, USA. p 945-958

Publication Year: 1989

CODEN: AVINBP ISSN: 0065-2814

Language: English

Document Type: PA; (Conference Paper) Treatment: A; (Applications); X; (Experimental)

Journal Announcement: 9108

Abstract: Many of the problems experienced with the design and installation of modern industrial process control systems do not stem from the hardware used but from the software design process. Technological advances in hardware reliability and functionality have far outpaced our ability as controls engineers to create software with comparable reliability and functionality. Common practices in software design for the programmable logic controller (PLC) entail little or no structured analysis and design, produce documentation at the end of a project if at all, create the inability to accurately predict development time and cost, and cause needless defects in control. Large, complex systems require a more rigorous engineering approach and methodology applied to software design. Small systems likewise can benefit from a more structured design environment, although these may be built using traditional methods. A **software engineering** approach and structured methodology is examined as it was applied to a project involving software modifications in a beer-blending facility with 24 networked PLCs. The approach is iterative in nature, featuring extensive use of models with levels of detail to deal with complexity. The methodology includes data flow diagrams, a data dictionary, state transition diagrams and is hierarchical in nature. Logical development is stressed prior to any coding. Benefits include the ability to communicate the system design requirements to management, peers and to the user prior to implementation, and to produce front-end documentation. Increased **peer review** is possible via walkthroughs. Defects in logic may be found earlier in the project through the construction of logical, 'paper' system models. (Author abstract)

Descriptors: *PROCESS CONTROL--*Computer Applications; COMPUTER SOFTWARE --**Software Engineering**; CONTROL SYSTEMS, PROGRAMMED; BREWERIES --Control Equipment; COMPUTER NETWORKS; SYSTEMS ENGINEERING

Identifiers: REAL-TIME CONTROL; PROGRAMMABLE LOGIC CONTROLLERS; YOURDON/DEMARCO SOFTWARE DESIGN

Classification Codes:

731 (Automatic Control Principles); 723 (Computer Software); 822 (Food Technology); 912 (Industrial Engineering & Management)

73 (CONTROL ENGINEERING); 72 (COMPUTERS & DATA PROCESSING); 82 (AGRICULTURE & FOOD TECHNOLOGY); 91 (ENGINEERING MANAGEMENT)

33/5/14 (Item 14 from file: 8)

05824279 E.I. Monthly No: EIM8911-044277

Title: ISLET: a program/proof editor to support the Vienna Development Method.

Author: Terwilliger, Robert B.

Corporate Source: Univ of Colorado, Dep of Computer Science, Boulder, CO, USA

Conference Title: Proceedings of the Twenty-Second Annual Hawaii International Conference on System Sciences: Software Track

Conference Location: Kailua-Kona, Hawaii, USA Conference Date: 19890103

E.I. Conference Number: 12333

Source: Proceedings of the Hawaii International Conference on System Science v II (of 4). Publ by Western Periodicals Co, North Hollywood, CA, USA. Available from IEEE Service Cent (cat n 89TH0243-6), Piscataway, NJ, USA. p 68-77

Publication Year: 1989

CODEN: PHISD7 ISSN: 0073-1129 ISBN: 0-8186-1912-0

Language: English

Document Type: PA; (Conference Paper) Treatment: X; (Experimental)

Journal Announcement: 8911

Abstract: ENCOMPASS is an environment that addresses the software quality problem using a combination of executable specifications, **peer review**, testing, and formal techniques similar to the Vienna Development Method. One of the most important tools in ENCOMPASS is ISLET, a language-oriented program/proof editor that supports the construction of formal specifications and their incremental refinement into verified implementations. In ISLET, the refinement process can be viewed as the development of a program or as the construction of a proof of correctness. Form the proof view, some refinements generate verification conditions that must be true for the step to be correct. ISLET encorporates a number of simple methods that can inexpensively certify a large percentage of the verification conditions generated. An overview of ENCOMPASS and ISLET is given, and an example of development using the editor is presented. 25 refs.

Descriptors: *COMPUTER SOFTWARE--***Software Engineering**; COMPUTER PROGRAMMING

Identifiers: VIENNA DEVELOPMENT METHOD; ENCOMPASS ENVIRONMENT; ISLET PROGRAM EDITOR; EXECUTABLE **SPECIFICATIONS**; **SOFTWARE** QUALITY

Classification Codes:

723 (Computer Software)

72 (COMPUTERS & DATA PROCESSING)

33/5/17 (Item 17 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

03865279 E.I. Monthly No: EI7912093370 E.I. Yearly No: EI79016604

Title: SOFTWARE BLUEPRINTS.

Author: Baucom, Patrica H.

Corporate Source: Control Data Corp, Hampton, Va

Source: Proc Annu Conf ACM Washington, DC, Dec 4-6 1978. Publ by ACM, New York, NY, 1978 v 1 p 385-392

Publication Year: 1978

CODEN: PACMDC

Language: ENGLISH

Journal Announcement: 7912

Abstract: The sequence of steps in **software** development include determination of requirements, **specification** of the various modules or subprograms to be developed, preparation of the module blueprints, **peer review** of the blueprints, construction or coding of the

modules, module testing, and system testing. The module blueprint is the focal point of the process. Utilizing the structured flowcharting techniques of I. Nassi and B. Shneiderman, the blueprint is prepared as a working design document. It contains the complete coding requirements of the module and includes a graphical representation of the detailed logic performed, an English description of the action performed, and the actual source code of the programming language employed. Currently recognized benefits of **peer review** are refined and expanded when the procedure is applied to validation of software blueprints. The procedures used provide a prototype for future software design applications. 10 refs.

Descriptors: *COMPUTER PROGRAMMING

Classification Codes:

723 (Computer Software)

72 (COMPUTERS & DATA PROCESSING)

33/5/20 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

08107474 INSPEC Abstract Number: C2002-01-6150G-007

Title: Automating techniques for inspecting high assurance systems

Author(s): Fisher, M.S.; Cukic, B.

Conference Title: Proceedings Sixth IEEE International Symposium on High Assurance Systems Engineering. Special Topic: Impact of Networking p. 117-26

Publisher: IEEE Comput. Soc, Los Alamitos, CA, USA

Publication Date: 2001 Country of Publication: USA x+237 pp.

ISBN: 0 7695 1275 5 Material Identity Number: XX-2001-02431

U.S. Copyright Clearance Center Code: 0-7695-1275-5/01/$10.00

Conference Title: Proceedings Sixth IEEE International High-Assurance Systems Engineering Symposium

Conference Sponsor: IEEE Comput. Society Tech. Committee on Distributed Process

Conference Date: 22-24 Oct. 2001 Conference Location: Boco Raton, FL, USA

Language: English Document Type: Conference Paper (PA)

Treatment: Applications (A); Practical (P)

Abstract: Software inspections are an example of a validation technique for improving software product quality and reducing development time and cost. They are a **peer-review** process that have shown to decrease costs, decrease development time, and increase quality through a detailed examination of work-in-progress with the objective of identifying defects. In this paper, we report a methodology used for modeling the defects found during a code inspection. The Orthogonal Defect Classification (ODC) was used to categorize and make inferences that resulted in synthesized checklists that reflect the latest project experience and the rules most frequently broken during software development. We were then able to develop techniques that automatically used the checklists to search for defects in the source code. This

automated defect detection technique will free up resources that can be used to look for more project specific issues. (17 Refs)
Subfile: C
Descriptors: program testing; **software engineering**
Identifiers: software inspections; validation technique; software product quality; development time; development cost; **peer-review** process; orthogonal defect classification; synthesized checklists; software development; automated defect detection technique
Class Codes: C6150G (Diagnostic, testing, debugging and evaluating systems); C6110B (Software engineering techniques)

33/5/22 (Item 3 from file: 2)
DIALOG(R)File 2:INSPEC

07599150 INSPEC Abstract Number: C2000-07-7300-001
Title: Open source meets big iron [**software engineering**]
Author(s): Beckman, P.; Wilson, G.V.
Journal: Dr. Dobb's Journal vol.25, no.6 p.30, 32, 34-5
Publisher: Miller Freeman,
Publication Date: June 2000 Country of Publication: USA
CODEN: DDJSDM ISSN: 1044-789X
SICI: 1044-789X(200006)25:6L.30:OSMI;1-B
Material Identity Number: B719-2000-005
Language: English Document Type: Journal Paper (JP)
Treatment: Practical (P)
Abstract: The lack of **software engineering** skills among scientists and engineers has became a critical bottleneck in many fields. Computer simulations are increasingly used to study problems that are too big, too small, too fast, too slow, too expensive, or too dangerous to study in the laboratory. The main stumbling block in this scenario is the degree to which a scientist's and engineer's lack of **software engineering** skills constrain his or her ability to develop and inspect software. Simply put, someone who does not know how to test software cannot tell whether someone else's software has been thoroughly tested. Similarly, successive waves of graduate students cannot contribute to a shared code base without a basic understanding of design, inspection, testing, and configuration issues. It will therefore not be enough to build better tools; scientists also need examples of design documents, test plans, code reviews, and everything else that makes up good **software engineering**. The Open Source model seems to be an elegant solution to these problems. Modern science, with its emphasis on sharing ideas and **peer review**, is in many ways the original open-source project. Open Source development can also provide scientists working in very specialized domains with a welcome degree of bankruptcy insurance. (0 Refs)
Subfile: C
Descriptors: engineering computing; natural sciences computing; software quality; software reliability

Identifiers: **software engineering** skills; scientists; engineers; computer simulations; graduate students; shared code base; configuration issues; design documents; test plans; code reviews; Open Source model; open-source project; Open Source development; specialized domains
Class Codes: C7300 (Natural sciences computing); C7400 (Engineering computing); C6110B (Software engineering techniques); C0310F (Software development management)

33/5/26 (Item 7 from file: 2)
DIALOG(R)File 2:INSPEC

04556771 INSPEC Abstract Number: C90014600
Title: Towards assurance measures for high integrity software
Author(s): McDermid, J.A.
Author Affiliation: York University, UK
Conference Title: Reliability '89 Proceedings p.3A/1/1-9 vol.1
Publisher: UKAEA, Warrington, UK
Publication Date: 1989 Country of Publication: UK 2 volume 750 pp.
Conference Sponsor: UKAEA; Inst. Quality Assurance
Conference Date: 14-16 June 1989 Conference Location: Brighton, UK
Language: English Document Type: Conference Paper (PA)
Treatment: General, Review (G)
Abstract: The author gives an overview of a proposed approach to the production of rational assurance measures for software integrity. The author concentrates on objectives and principles, not on details of particular measures. There are considerable technical and philosophical issues to be addressed in trying to produce assurance measures. The author addresses the distinction between the assurance that may be gained by technical personnel through development and evaluation of software, and that which needs to be imparted to 'laymen' as part of the certification process. The purpose of the paper is to clarify these issues, to outline the proposed approach, and to present the material for **peer review**. (11 Refs)
Subfile: C
Descriptors: software reliability
Identifiers: **software engineering**; assurance measures; software integrity; personnel; development; evaluation
Class Codes: C6110B (Software engineering techniques)

33/5/27 (Item 8 from file: 2)
DIALOG(R)File 2:INSPEC

04008702 INSPEC Abstract Number: C87065867
Title: ENCOMPASS; an environment for incremental **software** development using executable, logic-based **specifications**

Author(s): Terwilliger, R.B.
Issued by: University Illinois at Urbana-Champaign, IL, USA
Publication Date: July 1987 Country of Publication: USA viii+178 pp.
Report Number: UIUCDCS-R-87-1356
Language: English Document Type: Report (RP)
Treatment: Practical (P)

Abstract: The Vienna Development Method (VDM) supports the top-down development of software specified in a notation suitable for formal verification. VDM has been used in industrial applications to enhance the development process. In such environments VDM is applied in an informal, non-automated manner. ENCOMPASS is an environment which supports a formal development similar to VDM; it supports rapid prototyping and program verification, as well as providing simple facilities for configuration control and project management. In Encompass, components are specified using a combination of natural language and PLEASE, a wide-spectrum executable specification and design language. PLEASE specifications may be used in proofs of correctness; they may also be automatically transformed into prototypes which use Prolog to 'execute' pre- and post-conditions. In ENCOMPASS, PLEASE specifications are incrementally refined in to Ada implementations. The correctness of a refinement step can be verified using either testing, proof or **peer review** techniques. ENCOMPASS is an environment for the rigorous development of programs. Although detailed mechanical proofs are not required at every step, the framework is present so that they can be constructed if necessary. (259 Refs)

Subfile: C
Descriptors: logic programming; program verification; programming environments; specification languages
Identifiers: specification languages; logic programming; programming environments; Vienna Development Method; ENCOMPASS; formal development; rapid prototyping; program verification; configuration control; project management; natural language; PLEASE; Ada implementations
Class Codes: C6115 (Programming support); C6140D (High level languages)

33/5/30 (Item 1 from file: 6)
DIALOG(R)File 6:NTIS

2137130 NTIS Accession Number: ADA366089/XAB
Introduction to **Software Engineering** Practices Using Model-Based Verification
(Final rept)
Gluch, D. P. ; Brockway, J.
,Carnegie-Mellon University, Pittsburgh, PA. Software Engineering Inst.
Corp. Source Codes: 005343014; 416208
Report Number: CMU/SEI-99-TR-005; ESC-TR-99-005
Apr 1999 41p
Languages: English
Journal Announcement: GRAI9923
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NTIS Prices: PC A04/MF A01
Country of Publication: United States
Contract Number: F19628-95-C-0003
This introductory report describes the use of model-based verification techniques within software development and upgrade practices. It presents the specific activities and responsibilities that are required of engineers who use the model-based verification paradigm and describes proposed approaches for integrating model-based verification into an organization's **software engineering** practices. The approaches outlined in this report are preliminary concepts for the integration of model building and analysis techniques into **software engineering review** and inspection practices. These techniques are presented as both practices within **peer review** processes and as autonomous engineering investigations. The objective of this report is to provide a starting point for the use of model-based verification techniques and a framework for their evaluation in real-world applications. It is expected that the results of pilot studies that employ the preliminary approaches described will form the basis for improving the practices themselves and software verification generally.
Descriptors: ***Software engineering**; *Pilot studies; *Computer program verification; Computer programs; Inspection; Self operation
Identifiers: NTISDODXA
Section Headings: 62B (Computers, Control, and Information Theory--Computer Software)

33/5/31 (Item 2 from file: 6)
DIALOG(R)File 6:NTIS

2121574 NTIS Accession Number: ADA360608/XAB
Model for Joint Software Reviews
Kingston, G.
Defence Science and Technology Organisation, Canberra (Australia).
Corp. Source Codes: 057314000; 394805
Report Number: DSTO-TR-0735; DODA-AR-010-661
Oct 1998 43p
Languages: English
Journal Announcement: GRAI9914
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NTIS Prices: PC A04/MF A01
Country of Publication: Australia
Joint software reviews, involving the developer and the acquirer, play an important role in Defence's acquisition of software-intensive systems. However, academic and commercial work on software reviews has focused on intra- organisational **peer** reviews and software inspections. This

report argues that the principles which have been derived for inspections cannot be blindly applied to joint software reviews. This paper proposes a model of joint reviews, which draws on **software engineering**, decision and negotiation theory, and models of inspection. The model suggests that the structure and goals of the **review** group may significantly affect the outcome of the **review**. The model has also been used to suggest changes to Defence's software **review** process and to plan a series of studies on joint software reviews. These studies will provide additional and updated recommendations on how Defence should structure their software reviews for maximum efficiency and effectiveness.

Descriptors: *Computer programs; ***Software engineering**; Models; Theory; Efficiency; Inspection; Negotiations

Identifiers: NTISDODXA

Section Headings: 62B (Computers, Control, and Information Theory--Computer Software)

33/5/35 (Item 6 from file: 6)
DIALOG(R)File 6:NTIS

1608309 NTIS Accession Number: AD-A240 478/8

Software Technology for Adaptable, Reliable Systems (STARS): Standards and Guidelines for Repository

Davis, M. J.

Boeing Aerospace and Electronics Co., Seattle, WA. Systems and Software Engineering.

Corp. Source Codes: 097603001; 423540

Report Number: D613-100320

17 Mar 89 40p

Languages: English

Journal Announcement: GRAI9201

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NTIS Prices: PC A03/MF A01

Country of Publication: United States

Contract Number: F19628-88-D-0028

This technical report makes recommendations for guidelines and standards to be adopted for items delivered to the STARS repository. The guidelines and standards cover Ada source code, including specifications, and technical documentation. The STARS repository is to facilitate the distribution and sharing of software and documentation including interim and final results. Delivery of software will not be considered complete until code, along with confirmation of its compilation by the prime-contractor-designated **peer review** using a validated DoD compiler, has been made available for a designated STARS repository. Guidelines and standards for software and documentation, if used, simplify the sharing of textual and graphical material. To this end, the repository will not only provide guidelines and standards but will also acquire tools

that assist the repository users' in preparation of items according to these standards and assist the repository administration in enforcement of these standards.
Descriptors: Compilers; Computer programs; Graphics; Materials; Preparation; Reliability; Sharing
Identifiers: ***Software engineering***; *Systems approach; Standards; NTISDODXA
Section Headings: 62B (Computers, Control, and Information Theory--Computer Software)

33/5/36 (Item 7 from file: 6)
DIALOG(R)File 6:NTIS

1608306 NTIS Accession Number: AD-A240 475/4
Software Technology for Adaptable, Reliable Systems (STARS): **Peer Review** Capability Description
Davis, M. J.
Boeing Aerospace and Electronics Co., Seattle, WA. Systems and Software Engineering.
Corp. Source Codes: 097603001; 423540
Report Number: D613-20850
2 Feb 90 24p
Languages: English
Journal Announcement: GRAI9201
Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
NTIS Prices: PC A03/MF A01
Country of Publication: United States
Contract Number: F19628-88-D-0028
The purpose of this document is to describe the prototype **peer review** capability for Ada source code that was developed as part of BR40 Repository Integration. Besides describing the operation of the prototype, this document contains information related to installation on a repository and recommendations for future work. One objective of the STARS Program is to institutionalize **peer review** of source code and technical documentation as part of the system development process. This prototype tool tests the concept of a folded tree editor to support on-line **peer review** of Ada source code. the capability, named AdaPEERmacs was developed from a public domain editor known as GNU Emacs (GNU). The tree editing functions were obtained from the University of Illinois. Basic descriptions and motivational material for tree rather than language-sensitive or syntax-directed editing are covered by (TREE). Section 2 lists referenced documents; Section 3 describes the prototype operation in the form of a user guide; and, Section 4 contains recommendations.
Descriptors: Ada programming language; Coding; Computer programs; Editing ; Functions; Materials; Motivation; Operation; Prototypes; Reliability;

Sources; Test methods; Tools; Trees; User manuals
Identifiers: ***Software engineering***; *Prototypes; *Computer program verification; NTISDODXA
Section Headings: 62B (Computers, Control, and Information Theory--Computer Software)

33/5/37 (Item 8 from file: 6)
DIALOG(R)File 6:NTIS

1189857 NTIS Accession Number: N85-28609/4
Peer Review of a Formal Verification/Design Proof Methodology (Summary rept)
National Aeronautics and Space Administration, Hampton, VA. Langley Research Center.
Corp. Source Codes: 019041001; ND210491
Report Number: NAS 1.55:2377; L-15992; NASA-CP-2377
1983 56p
Languages: English Document Type: Conference proceeding
Journal Announcement: GRAI8520; STAR2317
Prepared in cooperation with Research Triangle Inst. Meeting held in Atlanta, 7-8 Jul. 1983.
Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
NTIS Prices: PC A04/MF A01
Country of Publication: United States
The role of formal verification techniques in system validation was examined. The value and the state of the art of performance proving for fault-tolerant computers were assessed. The investigation, development, and evaluation of performance proving tools were reviewed. The technical issues related to proof methodologies are examined. The technical issues discussed are summarized.
Descriptors: *Conferences; ***Software engineering***; Design analysis; Proving; Computer systems programs; Technology assessment
Identifiers: *Fault tolerant computing; Verifying; Performance; NTISNASA
Section Headings: 62B (Computers, Control, and Information Theory--Computer Software)

33/5/40 (Item 3 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

02292700 Genuine Article#: KQ197 Number of References: 25
Title: PROJECT NESTOR - NEW APPROACHES TO COOPERATIVE MULTIMEDIA AUTHORING LEARNING
Author(s): MUHLHAUSER M; SCHAPER J
Corporate Source: UNIV KAISERSLAUTERN,FB INFORMAT,AG TELEMAT,ERWIN

SCHROEDINGER STR/W-6750 KAISERSLAUTERN//GERMANY/; DIGITAL EQUIPMENT GMBH CEC KARLSRUHE/W-7500 KARLSRUHE//GERMANY/
Journal: LECTURE NOTES IN COMPUTER SCIENCE, 1992, V602, P453-465
ISSN: 0302-9743
Language: ENGLISH Document Type: ARTICLE
Geographic Location: GERMANY
Subfile: SciSearch
Journal Subject Category: COMPUTER APPLICATIONS & CYBERNETICS
Abstract: The paper reports about Nestor, a prototype of an integrated authoring / learning environment built on locally and remotely distributed multimedia workstations. The four main parts of Nestor are: an object-oriented kernel and hypermedia base system, distributed multimedia support, distributed cooperation support, and generic customizable authoring / learning support. The motivation, background, and organization of project Nestor are described as well as the overall architecture and the four main parts are described. At present, major parts of the Nestor prototype are functional, selected tools and features have led to either software products or public domain software; missing parts are expected in '92. Full integration of all parts, 'serious' courseware development, and evaluation and use are approached in parallel, partly in cooperation with external partners.
Descriptors--Author Keywords: COMPUTER AIDED INSTRUCTION ; INSTRUCTIONAL DESIGN ; AUTHORING LEARNING ENVIRONMENT ; OBJECT-ORIENTATION ; HYPERTEXT HYPERMEDIA ; NAVIGATION ; MULTIMEDIA ; COMPUTER-SUPPORTED COOPERATIVE WORK (CSCW)
Identifiers--KeyWords Plus: SYSTEMS
Research Fronts: 91-0090 001 (OBJECT-ORIENTED DATA MODELS; MULTIDATABASE SYSTEMS; INNOVATIVE **SOFTWARE ENGINEERING** ENVIRONMENTS)
91-0660 001 (GROUP DECISION SUPPORT SYSTEMS; COMPUTER-MEDIATED COMMUNICATION; AMERICAN ACADEMIC SCIENCE; SCIENTIFIC PERFORMANCE; FACULTY AT WORK; IMPACT OF **PEER-REVIEW**)
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